

The triangular relationship between TQM, organizational excellence and organizational performance: A case of Arab American University Palestine

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ABSTRACT

The primary objective of the present study was to examine the impact of total quality management (TQM) practices on the performance of organization performance of Arab American University Palestine. The study was also interested in examining the role of organizational excellence in organizational performance and also investigated the impact of organizational excellence in the relationship between TQM practices and organizational performance. To achieve the objective of the current study, we employed the structural equation modeling using statistical package of smart PLS-3. The questionnaires were distributed among the administrative staff of the university. Prior to establishing direct and indirect links between variables, we accessed the measurement of model and after establishment of the model fit, the structural model was used to examine the hypothesized relationships and the results confirmed the hypotheses of the survey. In other words, TQM practices had significant relationship with organizational performance and organizational performance had significant relationship with organizational performance. Moreover, TQM had a positive and significant effect on the organizational Excellence. Finally, organizational excellence also mediated the relationship between TQM and organizational performance.

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1. Introduction

Total Quality Management (TQM) is normally described as a comprehensive method for organization management using continuous improvement of business performance to satisfy explicit and implicit customers and stakeholders' expectations (Petrick, 2017). Thus, the organization's purpose is not to have TQM but to reach excellence and to contribute in achieving competitive advantage (Colurcio & Mele, 2006). TQM is has become popular because of the numerous studies confirmed its influence on performance and excellence (Hafeez et al., 2018). Antony and Bahattacharyya et al. (2010a) argued that there is no assumption that all performing organizations are excellent organizations. Therefore, they suggested more empirical studies on the relationship between performance and excellence with large sample size and including more variables. In connection with that, Ooncharoen and Ussahawanitchakit (2008) confirmed that organizational excellence had a substantial association with business perfor-

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mance. Moreover, Pinar and Girard (2008) found a significant relationship between organizational excellence and performance. They used three measurements to measure the effects of organizational excellence, namely, innovation, customer focus, and personnel commitment. The use of innovation to attain enterprise excellence and sustainability has been particularly emphasized (Eskildsen & Edgeman, 2012; Ramli & Desa, 2014; Golparvar & Azarmonabadi, 2014; Yeh et.al. 2018; Al Shamsi & Alsinani, 2018). In other words, they argued that innovation fills the gap between organizational excellence and sustainability. Based on the few articles in the literature talking about the relationship between organizational excellence and organizational performance, this relationship is not clearly defined (Antony & Bahattacharyya, 2010b). In addition to that, they argued that there supporting evidences that business excellence is not a part of business performance. Moreover, the literature clearly shows that not all models of business excellence fulfill the requirements which produce a research gap (Lu & Zhou, 2011; Mansor et al., 2013; Ling & Yuen, 2014; Callaway, 2017; Khan & Ali, 2017; Artha & Mulyana, 2018). Kanji and Sa (2007) argued that measurement of performance traditionally concentrates on the reasons that explain failure or success from historical perspective that is not enough to realize organizational excellence.

The main objective of the strategic management and innovative strategy implementation is to achieve the organizational excellence. Practically, business excellence supports the organizational capacity to accept and deal with any change (Oakland Consultation, 2005). Additionally, Oakland Consultation (2005) pointed out that business excellence requires managers to have obvious vision that will lead the organization to achieve its objectives with delivering value and managing organizations for customers and stakeholders. It is important to mention that excellence is the highest and outstanding performance level (Antony & Bhattacharyya, 2010a,b; Bhattacharyya et al., 2010); therefore, any organization should concern further in its performance. In other words, to achieve the high-performance record, nowadays, many organizations have been struggling to achieve organizational excellence so that they could differentiate themselves in the market from their rivals. Unfortunately, many of them failed to achieve this goal because of the lack of understanding of the business excellence concepts and processes (Dahlgaard, 2003; Riaz & Riaz, 2018; Aldulaimi, 2018). Moreover, although previous studies found benefits of adopting business excellence elements, most of these studies were in the USA and very few of these studies in the higher education sector of developing countries especially Palestine. Eskildsen et al. (2004) found that private and public organizations do not achieve excellent results in the same way; therefore, studies that were executed in private sector cannot be generalized for the public sector.

The current study is carried out on the sample of administrative staff of the Arab American University Palestine. The study is carrying out to achieve the following objectives

- To examine the impact of TQM practices on the performance of organization performance of Arab American University Palestine,
- To examine the role of organizational excellence in organizational performance of Arab American university Palestine,
- To investigate the impact of organizational excellence in the relationship between TQM Practices and organizational performance of Arab American university Palestine.

2. Hypothesis Development

2.1. TQM practices and Organizational Performance

In 1989, it was stated that TQM is a strategy employed to enhance quality and efficiency of goods and services, with the help of active participation of employees from all functions and levels within an organization. Literature of TQM shows that there are numerous studies reported the results regarding the effect of TQM practices and organizational performance (Terziovski & Samson, 1999). There are many rigorous studies that examined this relationship (e.g. Powell, 1995). The study performed an investigation on TQM as a potential source of sustainable competitive advantage. In addition to this study, there

is another complete empirical study that examined the relationship between quality practices and organizational performance by Sluti (1992) and Terziovski & Samson (1999). The findings of this study were found to be mixed with respect to its performance implications (Abusa & Gibson, 2013). In other words, quality practice has a significant positive effect on performance. A comprehensive review of the TQM related literature shows that the majority of the conducted researches reported a positive and significant relationship between TQM practices and organizational performance (Fotopoulos & Psomas, 2010). In addition, many researchers found that TQM practices influence positively non-financial performance (Demirbag et al., 2006); tangible benefits customer satisfaction, reduce manufacturing cost, and increase productivity (Dale & Wan, 2002); enhance market competitiveness (Chong & Rundus, 2004); increase market share growth affect both financial and non-financial performance (Singh & Smith, 2004); and enhance overall organizational performance (Powell, 1995). Moreover, it has been pointed out about the rareness of consistency in the quality management research due to the lack of universal and standard acceptable measurement instruments (Salaheldin, 2009).

Terziovski and Samson (1999) mentioned that a few researchers have also focused on examining TQM as a single framework while investigating the relationship between TQM and performance. Powell (1995) indicated that only few TQM activities exhibited positive association between TQM and organizational performance. These two mixed results suggested that several TQM constructs have significant effects on organizational performance (Hendricks & Singhal, 2001). It has been argued by many quality experts that the key successful management of quality starts at the top management of the organization (Lakshman, 2006). Management leadership is regarded as one of the most important components of the TQM strategy (Harrington & Williams, 2004). Several researchers identified various dimensions of TQM (Powell, 1995; Ahire et al., 1996). For instance, seven aspects of TQM were discovered; namely, strategic planning, leadership, information & analysis, customer focus, supplier management, process management, and human resource management (HRM) (Sila & Ebrahimpour, 2005). They found that leadership and information analysis had the greatest direct effect on the other factors. In TQM implementation, effective leadership can develop a clear vision, mission statement, and strategies to support the mission. Oakland and Harrison (2011) argued that TQM requires strong leadership and the greatest tangible advantage of excellence in leadership could improve the overall organizational performance.

In relation to that, the role of top management is very crucial for developing and supporting organizational culture based on teamwork spirit, participative decision making process, effective communication, and effective training (Koehler & Pankowski, 1996). Thiagarajan and Zairi (1997) argued that the lack of leadership and top management commitment could be considered as the main reason for 80% of TQM failure. In summary, the literature of TQM practices empirically emphasized the relationship between management leadership and organizational performance. According to Srinidhi (1998) strategic planning consists of all activities that a firm develops, implements, and assesses certain set of strategies for realization of its targeted goals and objectives. Moreover, TQM also encompasses strategic planning within an organization. Thus, TQM-strategic planning concerns the organizational capabilities, like skilled employees and an adequate funds and time to accomplish the goals (Black & Porter, 1996). In other words, the strategic planning's role is to manage the available resources in organizations for achieving higher degrees of success, and to direct capabilities towards gaining the planned objectives.

The importance of strategic planning has been realized by several studies and claimed that the organization capability to survive in an uncertain business environment can be resolved by strategic planning policies (Chenhall, 2005). Moreover, strategic planning considers the internal organizational process where mission and vision are translated into plans and actions. In connection with that, Sila and Ebrahimpour (2002) argued that strategic planning as one of the TQM elements should set guidelines of how the organization can design TQM practices to reach desirable objectives and to satisfy its customers' needs and meet the expectations. A detailed review of literature about TQM discloses that numerous studies such as Terziovski and Samson (1999), and Sila and Ebrahimpour (2005) reported a substantial association between organizational performance and strategy.

HRM is an element of TQM strategy which incorporates empowering employees, training, and employees' involvement (Ahire et al., 1996). When implementing TQM, employees ought to be encouraged to involve in decision-making, problem solving, and the financial success of the organization (Yusuf et al., 2007). That is, everyone in the organization is able to participate in the business and to know the current and future situation of organizational financial success. Through this knowledge, employees can involve more closely in the core business and participate positively in enhancing organizational performance. Therefore, TQM strategy motivates all employees in the organization to get closer to the desirable objectives of the organization and it is an important element of TQM strategy. Therefore, organization should build and develop TQM models that include HRM to help employees accept and implement TQM successfully (Kekale & Kekale, 1995). Additionally, Akdere (2006) pointed out that TQM practices through employees are positively associated with organizational competitiveness.

Implementation and development of TQM practices in any organization need an organizational culture change to help employees adopt TQM model. Employees are considered as an intangible asset of any organization, so if they get enough empowerment, training, and involvement in teamwork, they are expected to add a value to the organization and can be regarded as the main successful drivers for TQM implementation process. A review literature of TQM reveals that there were many studies reported a positive relationship between HRM and organizational performance (Flynn et al., 1995).

The factor of TQM —service design is more related to customer. Good service design in the organization contributes positively to the organizational performance by increasing customers' satisfaction and improving reputation (Lakhe & Mohanty, 1995). With good service design, the TQM of the organizations enhances the service performance in different dimensions. In addition, it leads to improve the processes in the organizations that will reflect in reduction of cost of poor quality such as late delivery, scrap, and rework. Therefore, the suitable service design offered by the organization can lead to increased customers' satisfaction, better work process, and can save time, and subsequently increase business profitability. According to Martínez Lorente et al. (1999), TQM encourage all departments' participants to involve in the design process to achieve the optimal design to satisfy the customers' requirements. In the literature of TQM, strong association exists between organizational performance and service design (Anderson et al., 1994; Anderson & West, 1996; Flynn et al., 1995).

The information system is among the most critical factors that contributes positively to the successful TQM implementation (Ahire et al., 1996). It is a combination of software, hardware, people, and procedures (Karthi, 2004). In the era of information and communication revolution, the importance of information and analysis system is the key driver of the effective performance (Saraph et al., 1989). In addition, they pointed out that if an organization has an appropriate information system, it can significantly react to the rapid changes in the business environment because of its effective data presentation, data collection, and data dissemination.

According to the literature, Saraph et al. (1989), Powell (1995), Ahire et al. (1996), and Sila and Ebrahimpour (2005) found positive association between organizational performance and information system. However, factors including planning and process management, and information & analysis are found to be neither positively nor negatively associated with each other (Samson & Terziovski, 1999). Furthermore, in 2005, Sila and Ebrahimpour reported an indirect influence of information & analysis on business results. Moreover, in 2006, Samat, Ramayah, and Saad investigated the relationship between market orientation and TQM and reported an insignificant impact of communication and information over market orientation.

According to Balbaster Benavent et al. (2005) TQM aims to reach customers' expectation through constant attempts of improvement at all levels of organization. Therefore, firms have to continuously make improvements in its practices for covering all organizational operations such as management activities, and styles and stated that the ultimate organizational goal is to accomplish higher customer satisfaction

outcomes. The drivers of continuous improvement are quality-conscious customers and the critical innovation (Dean & Bowen, 1994). In order to support and enhance continuous improvement practices in organizations, there are many factors such as HRM, top management support, and efficient information. There are many previous studies that indicate the positive effectiveness of continuous improvement organization's long term competitive position and productivity (Yusuf et al., 2007) and on organizational performance (Anderson et al., 1994; Flynn et al., 1995; Lakshman, 2006; Powell, 1995). However, Burli, Kotturshettar, and Dalmia (2012) found that continuous improvement, management support, and supplier management are not significantly impacting organizational performance. Benchmarking strategy is used by some organizations to compare themselves and their performance with the most leading and successful competitors in the market. It is great to mention that the core of benchmarking practice is to analyze the services, products, and techniques that are used and produced by other competitors either in the same industry or other industries to achieve competitive advantage (Ahire et al., 1996). Thus, process efficiency, cost saving, and customers 'and employees 'satisfaction are some criteria that can be used in benchmarking practice. Numerous researchers (e.g. Powell, 1995; Ahire et al., 1996; and Teriovski & Samson, 1999) proclaimed that benchmarking positively influences organizational performance. However, few factors of TQM provided no contribution in firms' quality outcomes, namely work teams, benchmarking, higher manufacturing techniques, and closer supplier relations.

H₁: TQM practices have significant relationship with organizational performance.

2.2. *Organizational excellence and organizational performance*

Organizational excellence and organizational performance are the most important measurement indicators for the organization's success, achievement, competitiveness, advancement, and development. These indicators are somehow interlinked with each other and results in one of these factors, however practicing organizational excellence calls for innovation in organizational performance that results in superior organizational performance. Firms who get success in achieving performance level of 60 percent or above is said to be excellence organizations. Antony and Bhattacharyya (2010a,b) argued that existing models of excellence look at excellence as an outstanding level of performance. In the field of business performance, there is a basic question of how organizations can pursue business excellence and sustain and achieve competitive advantages (Dahlgaard & Dahlgaard-Park, 2006). In relation to pointed out that organizational excellence is a holistic approach that improves organizational performance. Moreover, proved that organizational excellence has a significant association with business performance. In addition, Pinar and Girard (2008) in their empirical study of 200 Turkish firms, found a significant relationship between organizational excellence and organizational performance.

H₂: Organizational performance has significant relationship with organizational performance.

2.3 *Total Quality Management (TQM) and Organizational Excellence*

Deming (1986) and Juran et al. (1999) stated that numerous quality experts have declared that quality management strategies can enhance profitability through product marketability i.e. boosting organizational efficiency and minimizing cost that arises from defects and failures. According to the empirical evidences available in the literature, positive association is found between TQM and quality of products, improving customer satisfaction, competitive advantages, and market share (Fotopoulos & Psomas, 2010; Kaynak, 2003; Samson & Terziovski, 1999). However, most of quality practices are in the right direction, but there still a shortage of realization the important role of employee in quality improvement process to achieve business excellence (Rashid & Aslam, 2012). Shukla (2013) argued that TQM can provide an explanation and processes for spontaneous investigation for excellence and quality. Numerous researchers have previously discovered a strong correlation between business excellence and TQM in their studies. In 2008, Sharma and Kodali reported TQM excellence to be an important factor to get excellence in manufacturing firms. The organization's purpose is not to have TQM but to adopt it to achieve excellence and to contribute in achieving competitive advantage (Colurcio & Mele, 2006). In

addition, TQM practices help organizations enhance business excellence. They found that business excellence could be supported through implementing TQM. Moreover, Hassan et al. (2007) studied the impact of TQM and ISO 9000 on creating competitive advantages and business excellence. Their findings reported a significant effect of implementing TQM and ISO9000 to have customer satisfaction, productivity, product quality, and delivery. Based on the previous explanation and discussion, the following hypothesis was proposed:

H₃: TQM has a positive and significant effect on the organizational Excellence.

2.4. Organizational Excellence as a mediator between TQM and Organizational Performance

Organizational excellence has recently emerged to have the same meaning as business excellence with the exception that it may apply more in public sector organizations (McAdam, 2000). Excellence is the main goal of all modern organizations and can be considered as a consequence of innovative and creative strategy implementation, such as TQM, and its way for success on the competitive path. Innovation is the main drive that shifts organizations from TQM to business excellence level (Mele & Colurcio, 2006). In 1998, Kanji in an attempt to assess stakeholders' satisfaction for detailed evaluation of organizational performance, also conducted his study on measuring certain features of business excellence. McAdam et al. (1998) suggested that the main purpose of a firm is not solely to incorporate TQM practices rather to implement this strategy in terms of managerial perspective, which facilitates organization towards acquiring business excellence (Ali & Haseeb, 2019; Haseeb et al., 2018; Haseeb., 2019; Suryanto et al., 2018). Generally, when implementation of TQM is linked with excellence, it turns into a multidimensional shape of aspects such as: leadership and coherence with objectives, development of partnerships, orientation to customer and results, public responsibility, management in terms of facts and processes, and learning, innovation, and continuous improvement (Colurcio & Mele, 2006). They also argued that an organization achieves an excellent 204 position when it is capable of generating organizational performance and results of maximum value with respect to competitors. From the above discussion we can conclude that TQM practices can help organizations enhance organizational excellence (Hassan et al., 2007). On the other hand, excellence models and practices based on TQM principles can achieve a high level of organizational performance. Therefore, the following hypothesis was proposed:

H₄: Organizational Excellence mediates the relationship between TQM and Organizational Performance.

3. Methodology

The current study has employed the quantitative approach. The quantitative approach used the surveys-based methodology the reason why the quantitative research design has been framed for this study, is that it helps a researcher in thoroughly examine a large sample of respondents and then generalize their responses. Meanwhile it also helps a researcher in obtaining the summarized behavior of respondents participating in the study. This study has adapted a questionnaire to quantify the responses and opinions regarding issues raised in this study. The use of questionnaire also helps the researchers in understanding the relationship between the set of dependent, independent and intervening variables. The questionnaire was designed according to the objectives, problem and hypotheses of the study to determine the relative importance of factors that may control the employees' performance in Arab American University in Palestine. The data collected through the surveys were loaded into the Microsoft Excel, the IBM SPSS, and Smart-PLS. The five-point Likert scale has been used to operationalize the variables and their sub constructs. The questionnaire is adapted from the previous studies.

4. Analysis

The SEM-PLS, which in modern times is one of the robust techniques to analyse the data on social issues has been implemented as the statistical tool in current study. Recently many researchers have

employed and argued that whenever we are dealing with some novelty in conceptual models or need an advance assessment of any existing phenomena, we prefer SEM-PLS over other technique such as multiple regression analysis. Hair et al. (2016) argued that the PLS-SEM is a two-step equation, which is an advance form of multiple regression and accounts for two assessments namely the inner model assessment and the outer model assessment. The first step is estimation of the reliability and validity of the model. In Smart-PLS, after obtaining the results of reliability and validity for each construct, examining the structural model results is necessary in order to test the hypotheses. There are five steps of procedures in examining the structural model results; (1) examine the structural model for collinearity issues; (2) the significance of path coefficients; (3) followed by examining the level of R^2 values; (4) assessment of f^2 effect size; and last but not least, (5) examining the predictive relevance (Q^2 and the q^2 effect size). The reason why the SEM-PLS is preferred over the multiple regression is that the earlier handles the multiple equations simultaneously and can produce results with a simultaneous operation by producing a relationship with all direct and intervening phenomena.

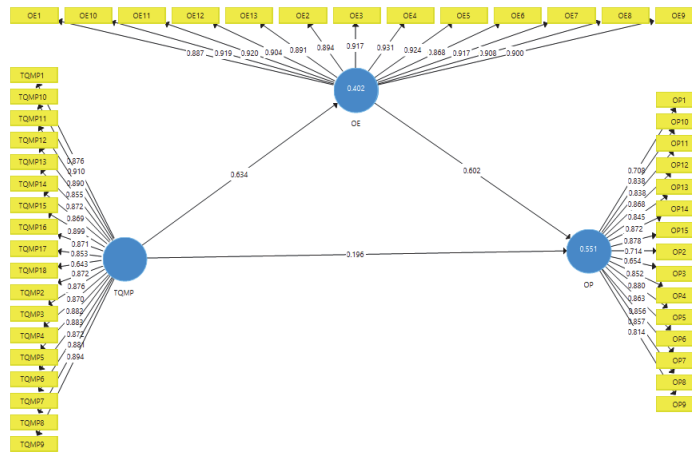


Fig. 1. Outer Model

Validity and reliability of data were inspected in the initial step of analysis of data. Measures of composite reliability and Cronbach's alpha were examined. The value of 0.70 is considered as an acceptable value for the measure of Cronbach alpha. Furthermore, threshold level of 0.70 as mentioned by Hameed et al. (2018) and Basheer et al. (2019), for composite reliability was also observed. Moreover, average variance extracted, and factor loadings were analyzed for observing convergent validity and internal consistency. According to Basheer et al. (2019), factor loadings and AVE must be above 0.5. In the present study, the values of AVE and factor loadings are above 0.5. In addition, external consistency was also examined using discriminant validity.

Table 1
Validity and reliability

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
OE	0.982	0.982	0.984	0.821
OP	0.968	0.98	0.97	0.681
TQMP	0.98	0.98	0.982	0.751

The discriminate validity is one of the measures to examine the interrelationship of the reflective variables with their own indicators. Basically, it shows or measures that the measurement or operationalization of the variables which genuinely are not linked are linked in the case of study. Fornell-Larcker introduced one of the robust and widely used measure of discriminate validity, therefore the current study has used this value as a basis to evaluate the discriminate validity. The index of the reliability of a variable must be greater than 0.70. However, the values in cross loadings were the same for outer loadings value, the difference is in cross loadings and it is compared with correlation among constructs.

Concisely, the result of evaluating the discriminant validity of this study thru Fornell-Larcker Criterion and Cross Loadings is shown in the Table 2

Table 2
Discriminant Validity

	OE	OP	TQMP
OE	0.906		
OP	0.727	0.825	
TQMP	0.634	0.578	0.867

In the next step of data analysis, in order to test the proposed hypotheses that were developed on the literature a PLS bootstrapping was employed. A threshold level of 1.96 t-value was set for the rejection or acceptance of hypotheses. Firstly, all the observed relationships have exhibited t-value of more than 1.96, thus showing acceptance of all the set of direct hypotheses including H1, H2 and H3. The results are shown in Table 3 and in Fig. 2.

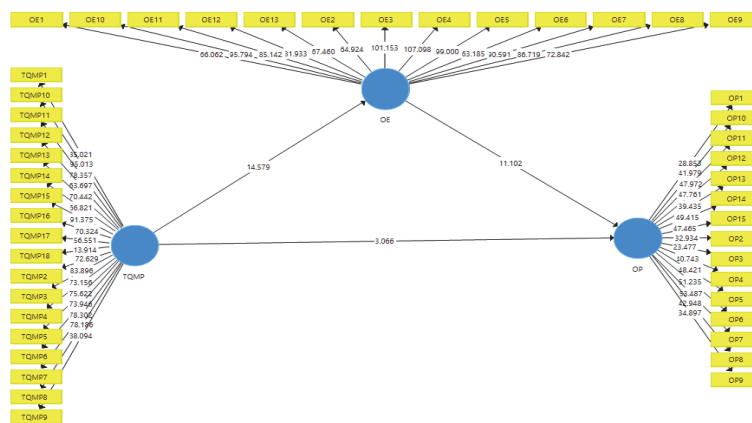


Fig. 2. Inner Model

Table 3
Direct effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
OE → OP	0.602	0.603	0.054	11.102	0
TQMP → OE	0.634	0.637	0.044	14.579	0
TQMP → OP	0.196	0.199	0.064	3.066	0.002

The current study has also tried to investigate the mediating role of OE in the relationship between TQM and OP. The findings of the study provided support for the hypothesis and H₄ is accepted significantly. The results are discussed in Table 4

Table 4
Indirect Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
TQMP → OE → OP	0.382	0.383	0.041	9.414	0

Predictive power of the structural model can be assessed by the R² value of the endogenous construct (Hair et al. 2012). Thus, R-squared simply defined as the “percent of variance explained” by the model. In this study the R² value is 0.641, which suggests that 64.1 % of the variance of OP can be explained by TQM and OE.

Table 5
Expected Variance

	R²
SCP	64.1%

5. Conclusion

The current study provides support to the view that the TQM, is business philosophy which not only has emerged as a determinant of success but also a factor of organizational excellence. Implementation and development of TQM practices in any organization need an organizational culture change to help employees accept and adopt TQM model. Employees are the intangible asset of any organization, so if they get enough empowerment, training, and involvement in teamwork, they are expected to add a value to the organization and can be regarded as the main successful drivers for TQM implementation process. Organizational excellence and organizational performance are the most important measurement indicators for the organization's success, achievement, competitiveness, advancement, and development. These indicators are somehow interlinked with each other and results in one of these factors, however practicing organizational excellence calls for innovation in organizational performance that results in superior organizational performance. Firms who get success in achieving performance level of 60 percent or above is said to be excellence organizations. The main objective of the current study was to examine the impact of TQM practices on the performance of organization performance of Arab American University Palestine. In addition to that, the current study is also interested in examining the role of organizational excellence in organizational performance of Arab American University Palestine. Finally, the study was carried out to investigate the impact of organizational excellence in the relationship between TQM Practices and organizational performance of Arab American University Palestine. To achieve the objective of the current study, we have employed the structural equation modeling and used the statistical package of smart PLS-3. The data by mean of an adapted survey instrument in the form of questionnaire is collected from the administrative staff of the Arab American University Palestine. The results of this survey have confirmed that TQM practices had significant relationship with organizational performance and organizational performance had significant relationship with organizational performance. Moreover, TQM had a positive and significant effect on the organizational Excellence. The current study which in authors' knowledge is among few pioneering studies on this issue and will be helpful for experts, operation managers, academicians, researchers and other policy makers in formulating policies.

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